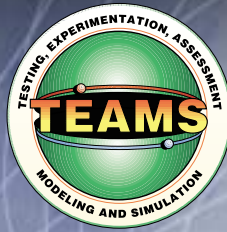


NAVAL SEA SYSTEMS COMMAND



# TEAMS

TESTING, EXPERIMENTATION, ASSESSMENT  
MODELING AND SIMULATION

NAVAL SURFACE WARFARE CENTER



DAHLGREN DIVISION

DAHLGREN PANAMA CITY DAM NECK

## Mission

The Testing, Experimentation, Assessment, Modeling and Simulation (TEAMS) team and facility at NAVSEA's Dahlgren Division provide a unique environment for the development of live and simulated sensor and sensor-to-shooter systems for the joint warfare community, as well as the modeling and simulation expertise necessary to transform weapons systems concepts into reality.

The future of expeditionary warfighting capabilities depends on our ability to sense the complex joint theater of sea, air, and land battlespace, to quickly detect enemy targets, to rapidly deliver the firepower necessary to defeat those targets, and then to accurately assess the results. The most effective method to develop such capabilities is through modeling of warfighting systems using a combination of interfaces with many systems in a synthetic environment plus interfaces with actual fielded hardware. Then, not only can current and prototype weapon systems be tested, but other possible scenarios can be easily explored—the "what if" factor. Using the modeling and simulation expertise and capabilities available at the TEAMS facility, our customers can also train warfighters to function in the complex joint warfare battlespace.

Coordinated with the Office of Naval Research, the Marine Corps Systems Command, and the Marine Corps Warfighting Lab, TEAMS allows user-friendly, man-in-the-loop research and development laboratories to evaluate algorithms, sensors, and targeting systems in a real or simulated battlespace. TEAMS brings together the facilities, equipment, experience, expertise, and creativity to efficiently and affordably support development of joint warfighting capabilities—the battlespace of the future.

## Simulation-Based Acquisition for the 21st Century

The TEAMS facility is a gateway to a growing network of interconnected test facilities and research and development laboratories. The network allows user-friendly, man-in-the-loop, and system-in-the-loop operations to develop, evaluate, and operate in real battlespace environments. As one of the remote modeling and simulation facilities participating in Advanced Distributed Simulation (ADS) exercises, TEAMS supports a broad range of projects and tools, such as:

- **Sensor Assets**—from passive RF to acoustic beamformers to infra-red search and track to applied lasers
- **Shortstop Electronic Protection System (SEPS)**—a mobile, electronic countermeasure system designed to protect personnel and high value targets from the predominant indirect fire threats without operator intervention.
- **Virtual Tactical Experiments**—Using a combination of real and synthetic components in a virtual environment, our customers are able to analyze current data as well as introduce additional data and analyze how it affects the database. Additionally, new weapons systems or concepts can be introduced to the scenario.
- **Acoustic Sensor Development Platform (ASDP)**—Capable of collecting data from up to eight sensors simultaneously, this system uses PC-based software tools to test the feasibility of beamforming, Automatic Target Recognition (ATR), and other target detection and classification algorithms.
- **Acoustic Target Acquisition System (ATAS)**—an Avenger-mounted acoustic sensor used to detect, locate, classify, and identify RW, FW, and UAVs that provides 360-degree azimuth cueing with an accuracy of 5-10 degrees; used to reduce fratricide and improve survivability of men and equipment
- **Air Defense Alerting Device (ADAD)**—man-portable IRST sensor that detects and provides precision AZ/EI cueing for RW, FW, and UAV targets
- **Digital Terrain Database**—an extensive database of the terrain of the entire world in various formats—available for use in modeling and simulation for research, development, and testing of current and new weapon systems.

## TEAMS Services

The TEAMS facility, staffed with experienced personnel, offers the following research, development, testing and evaluation support:

- Test plan analysis, writing, and specification
- Creation of HLA-compliant distributed simulation for training
- Modeling and rapid prototyping of new warfare systems
- Site coordination
- Meteorology
- RF long-haul communication
- Network and phone line communication
- Post-test analysis
- Algorithm assessment
- Statistical analysis



## TEAMS Facility

Completed in early 1999, the TEAMS facility contains 4000 square feet of electronics in its state-of-the-art computer and visualization laboratory. This facility houses a vehicle bay for working on small vehicles and larger sensor systems, a sensor development lab for hardware construction and testing, high-bandwidth network connections, and secret-level security. Located at NAVSEA Dahlgren and overlooking the Potomac River, the facility has a clear line of sight to the Potomac River Test Range.

## Customers

Our customers are engineers, analysts, program managers, technology developers, concept developers, and test and evaluation specialists from the Naval Expeditionary Forces (NEF), the United States Marine Corps, and others tasked with developing, procuring, and deploying effective weapons systems within the joint warfare community.



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